

Claims

- 5 1. A method for treating a dilatation of a body, including the steps of:
inserting a catheter into a localized region of said body;
exuding from said catheter a substance capable of perfusing into at least some tissue in
said localized region;
allowing said substance to perfuse into a tissue of said localized region;
emitting from said catheter energy of a frequency and in an amount effective to cause a
temperature change in said substance;
whereby, at least some tissue in said localized region is treated.
- 10 2. A method as in claim 1, wherein said localized region includes a lumen or
sphincter.
- 15 3. A method as in claim 1, wherein said localized region includes cancerous, en-
gorged, inflamed or infected tissue.
- 20 4. A method as in claim 1, wherein said localized region includes an aneurysm, a
blocked lumen, a stenosed lumen or a constricted lumen.
5. A method as in claim 1, wherein said localized region includes a cyst, tumor or
wart.

6. A method as in claim 1, wherein said localized region is associated with a body system, said body system including a blood vessel, lung tube, lung pocket, gastrointestinal system, urogenital system, nerve or nerve sheath.

5 7. A method as in claim 1, wherein said localized region is associated with a particular organ including a kidney, prostate, retinal lesion or skin lesion.

8. A method as in claim 1, wherein said exuded substance includes a saline solution.

10 9. A method as in claim 1, wherein said exuded substance includes a nontoxic foam.

10. A method as in claim 1, wherein said exuded substance includes a collagen.

15 11. A method as in claim 1, wherein said exuded substance includes a bioactive substance, said substance including a drug or enzyme.

12. A method as in claim 1, wherein said exuded substance includes a chemoactive substance including an acid, lipid-breaker or soap.

20 13. A method as in claim 1, wherein said exuded substance includes an instrumentative substance including a florescent or x-ray marker.

14. A method as in claim 1, wherein said energy is emitted by electrical contact.

15. A method as in claim 1, wherein said emitted energy includes RF (monopolar or bipolar), microwave or laser.

16. A method as in claim 1, wherein said emitted energy includes ultrasound.

17. A method as in claim 1, wherein said emitted energy includes physical heating or cooling.

18. A method as in claim 1, wherein said treatment includes shrinkage of said lumen or said sphincter to a selected dimension.

19. A method as in claim 1, wherein said treatment includes shrinkage of said lumen or said sphincter to a substantially normal dimension.

20. A method as in claim 1, wherein said treatment includes shrinkage of said engorged or inflamed tissue by removal of lipids or water.

21. A method as in claim 1, wherein said treatment includes shrinkage of said engorged or inflamed tissue by removal of an ablated tissue or a dead cell matter.

22. A method as in claim 1, wherein said treatment includes shrinkage of said engorged or inflamed tissue by removal of infection products.

23. A method as in claim 1, wherein said treatment includes destruction of a damaged or a diseased tissue.

24. A method as in claim 1, wherein said treatment includes promotion of epithelial
5 growth.

25. A method as in claim 1, wherein said treatment avoids local nerve centers.

26. A method as in claim 1, including an additional step of isolating said localized re-
10 gion using a structure inserted as part of said catheter.

27. A method as in claim 26, wherein said inserted structure includes an occluding
balloon.

28. A method as in claim 26, wherein said inserted structure includes a space-filling
15 balloon with a lumen through it.

29. A method as in claim 1, wherein said catheter includes instrumentation used for
feedback.

30. A method as in claim 29, wherein said feedback includes surgical visualization
20 provided by a camera, RF energy, x-rays, florescence or ultrasound.

31. A method as in claim 29, wherein said feedback includes systemic, comprising measurement of pH, pressure or temperature.

32. A method as in claim 29, wherein said feedback includes monitoring for said treatment, including an element for determining a location of a specified tissue element to be treated.

33. A method as in claim 29, wherein said feedback includes monitoring for said treatment, including pacing.

34. A method as in claim 1, wherein said exuding and perfusing includes a physical method of delivery.

35. A method as in claim 34, wherein said exuded and perfused substance includes included in a saline solution or nontoxic foam.

36. A method as in claim 34, wherein said physical method of delivery includes a porous balloon, a microporous balloon, or a balloon with a porous or microporous membrane.

37. A method as in claim 34, wherein said physical method of delivery includes direct emission from said catheter.

38. A method as in claim 34, wherein said physical method of delivery includes a local structure, comprising an absorbable basket or a stent.